FISHERIES MANAGEMENT - RESERVOIR SECTIONS

Management History - All Reservoir Sections

Rainbow Trout

Historically, the reservoir fisheries were managed primarily for rainbow trout and yellow perch. Hauser and Holter Reservoirs maintained low level walleye populations since the 1950s. Fisheries management strategies were modified substantially following expansion of the Canyon Ferry Reservoir walleye population in the late 1990s.

The rainbow trout population in the upper Missouri River Reservoir system is maintained through stocking of hatchery fish. Limited spawning and rearing habitat preclude natural recruitment at levels adequate to maintain a sustainable fishery. Habitat degradation in tributary streams and exposure to whirling disease has also limited successful natural reproduction of rainbow trout.

Montana Fish, Wildlife and Parks has adjusted stocking strategies several times to sustain the rainbow trout fisheries. Adjustments have included changing the number and size of fish stocked, as well as adjusting the season of the year that the fish were stocked. Beginning in the 1980s, FWP began experimenting with different strains of rainbow trout and with different methods of dispersing them into the reservoirs to improve survival of stocked fish. Evaluation of stocking techniques indicated that stocking yearling rainbow trout (5-7 inches in length) during spring plankton bloom (May) yielded the most consistent survival of hatchery fish. Following walleye population expansion in the system, stocking fish larger than seven inches was necessary to avoid walleye predation. Stocking was added in the fall to take advantage of lower energy demands of walleye during cooler water temperatures, reduce the potential for avian predation, and maximize use of hatchery space for production. Stocking of yearling fish in Canyon Ferry Reservoir was discontinued in 2014, and stocking season in all three reservoirs was standardized to summer and fall in the mid-2010's.

Over the last 50 years, there have been significant fluctuations in rainbow trout abundance in the upper Missouri Reservoir system. FWP measured angler catch rates in the mid-1960s as low as 0.08 rainbow/hour, and again in the 1980s as low as 0.08 – 0.14 rainbow/hour. These fluctuations were closely associated with the varying success of the department's stocking program. After a significant increase in rainbow trout abundance during the mid-1990s from increased stocking rates of yearling fish in Canyon Ferry Reservoir, the rainbow trout population trend remained relatively stable at approximately 10 rainbow trout per net throughout the late-1990s (Figure 5). By 2000, large year classes of walleye in Canyon Ferry Reservoir produced in 1996 and 1997 were large enough to effectively prey upon stocked rainbow fingerlings, and rainbow numbers declined in subsequent years. Stocking larger sized (7 to 8-inch) fish in spring and fall improved rainbow recruitment, resulting in stable to slightly increasing abundance. The adjustment to stocking in the summer and fall has maintained abundance levels high enough to maintain the quality of the rainbow fishery.

Past management efforts have focused on rehabilitating degraded tributaries entering the upper Missouri River system to enhance spawning habitat and increase recruitment of juvenile trout into the fishery. Sizeable spawning runs of wild strain rainbow trout have developed in various tributaries in the system, but recruitment of wild trout from this increased spawning activity to the fishery is minimal. Efforts to improve spawning habitat and improve the wild fishery will continue.

Brown Trout

Brown trout have historically remained at relatively low levels throughout the reservoir system and provide limited trophy-fishing opportunities. The brown trout population declined significantly between the mid-1980's and mid-1990's as a result of drought, spawning competition with Kokanee, and walleye expansion throughout the system. Spawning habitat enhancements have resulted in little population improvement, and brown trout abundance persists at historically low levels.

Kokanee Salmon

Kokanee salmon were first introduced into Hauser Reservoir in the 1950's. Kokanee plants were unsuccessful in producing a fishery in the reservoir despite stocking almost one million fish over a six-year period. The kokanee population that thrived through the 1980s and 1990s apparently originated from plants that were made into Canyon Ferry Reservoir in the late 1960s or from plants made into the Helena Valley Regulating Reservoir in the 1970s. Some of the kokanee stocked in Canyon Ferry Reservoir were siphoned into the Regulating Reservoir where they survived and produced a good fishery, which prompted annual stocking beginning in 1971. The kokanee population in Hauser Reservoir developed into a fishable population when the Regulating Reservoir was drained for repairs in 1978. During the repair work kokanee spilled in the Hauser system. Since the 1970's the Hauser Reservoir kokanee population underwent large annual fluctuations. Record high runoff and associated fish flushing during 1995, 1996 and 1997 resulted in a severe decline in the Hauser Reservoir kokanee population to a fraction of early 1990s levels. Hatchery plants throughout the late 1990s and early 2000s were unsuccessful at reestablishing the kokanee population. Each year a small number of kokanee spawn in Spokane Creek and other Hauser Reservoir tributary streams or spill from the Helena Valley Regulating Reservoir into Hauser Reservoir.

The kokanee fishery in Holter Reservoir was largely sustained through flushing of fish downstream from Hauser Reservoir. Similar to Hauser Reservoir, the population underwent large annual fluctuations. Unlike in Hauser Reservoir, stocking kokanee in Holter saw limited success following population declines in the late 1990s. A low level kokanee population remains in Holter Reservoir despite no kokanee stocking since the late 2000s.

Yellow Perch

Yellow perch have historically been one of the most abundant species of fish in the upper Missouri River Reservoir system since planted in the late 1930's in Canyon Ferry and Hauser Reservoirs. However, the perch population has fluctuated extensively over time. Generally, these annual fluctuations are related to limited spawning and rearing habitat, variable spring weather conditions, reservoir levels, and predation. Historically, no limits were in place on the number of perch anglers could harvest. Due to declining yellow perch abundance in the late 1990's, harvest restrictions were implemented in 2000 for the first time in Montana (50 fish daily on Canyon Ferry and Holter Reservoirs). As numbers continued to decline, waterbody-specific limits were reduced to as low as 10 fish daily and in possession (Canyon Ferry Reservoir). Perch abundance in Holter increased dramatically in 2013 and the harvest limit was increased; however, perch populations in the Canyon Ferry and Hauser Reservoirs remain at historically low levels.

Yellow perch population trends have been monitored by fall sinking gillnets and summer beach seine surveys and roving creel census' since the 1980's. Angler catch rates for yellow perch as high as 5.74 fish per hour has been documented during years of high abundance.

Ongoing management efforts to improve perch populations have included methods to reduce the impacts of reservoir operations on the fishery and enhancing spawning and rearing habitat by providing additional structure.

Walleye

Walleye in the upper Missouri River Reservoir system were initially stocked in Hauser Reservoir in 1951. Over the next decade walleye became established in Holter Reservoir, likely from flushing over Hauser Dam. Walleye were not observed upstream of Canyon Ferry Dam during sampling from 1955 through 1988. The first walleye in Canyon Ferry Reservoir was captured in 1989 during rainbow trout fall netting. Walleye populations in Canyon Ferry, Hauser, and Holter Reservoirs are self-sustaining populations that are not supplemented through stocking (Thomas 1992).

Walleye populations in Hauser and Holter Reservoirs were relatively stable in both size and abundance prior to the late 1990's when the Canyon Ferry Reservoir population grew rapidly (Horn 2004). Since that time, walleye abundance throughout the system has increased substantially. Additionally, walleye have drastically reduced primary forage fish abundance such as perch and suckers, and thereby negatively affected walleye growth and size distribution. Walleye population abundance throughout the system have all reached record high abundance levels which typically coincided with historic low forage fish abundance. Active walleye management, such as liberal fishing regulations, are necessary to meet management goals, which are intended to maintain walleye abundance to reduce impacts to other species while maintaining desirable size classes in the walleye fisheries.

In addition, monitoring the abundance of white suckers and yellow perch has assisted in efforts to evaluate the forage fish availability for walleye. Monitoring remains an important component of data collection as the fish community fluctuates due to habitat changes, harvest, natural reproduction, and species composition changes.

Reservoir Management Limiting Factors and Species Goals

The primary management plan goal is to provide a cost effective, quality multi-species fishery that maintains the current level of angler use during both the open water and ice fishing seasons and maintain populations of non-game species (e.g., suckers, dace, sculpins). Fisheries management priorities are to maintain healthy populations of rainbow trout, yellow perch, walleye, brown trout, and burbot while providing additional opportunity to fish for other species that occasionally contribute to the fishery (e.g., kokanee.).

To achieve the primary goal for the upper Missouri River reservoir system, limiting factors, species-specific management strategies, and other management issues must be understood and developed to sustain fisheries in the plan area.

Limiting Factors

Determining all of the limiting factors that regulate fisheries in complex systems like the upper Missouri River reservoir system is difficult to assess. Until factors limiting fisheries production in the system are addressed, these fisheries will not reach their full potential. Below are some limitations that exist for reservoir fisheries throughout the system:

- Perch populations tend to be limited by reproductive/rearing success and predation, while trout populations are limited by number and size of fish stocked and recruitment of stocked fish. In

contrast, walleye reproductive potential is high and may ultimately be limited by available forage, predators (e.g. Northern pike), and other environmental variables (i.e., spring spawning conditions). A depleted forage base will ultimately result in reduced growth and productivity of not only walleye, but also other fish in the system.

- Available spawning and rearing tributaries are insufficient to adequately supply juvenile brown and rainbow trout for the reservoirs, and hatchery allocation constraints and costs limit the number of fish available for stocking. The limited spawning habitat of rainbow trout and brown trout further impacts their poor reproductive success, and predation by walleye further reduces recruitment of successfully reared fish. Yellow perch spawning and rearing success is variable, and density of the adult population appears to be limited by recruitment. A relatively small spawning stock of perch are capable of producing a large number of offspring, however lack of suitable nursery and cover habitats leave juvenile perch vulnerable to predation thereby limiting recruitment of entire age classes. Heavy predation has the potential to permanently suppress the yellow perch population and may limit the ability to manage the yellow perch fishery.

- Walleye diet studies indicate a high preference for yellow perch, suckers, and trout. At current yellow perch and sucker population levels and reproductive capability, it is unknown if these species can adequately maintain a sustainable forage base for the walleye population. Predation of stocked trout could impede the cost-effectiveness of fish stocking and hinder recruitment to the fishery.

- Low dissolved oxygen in the deep water and below system dams can occur in summer and early fall months. Deep areas, greater than 60-80 feet, at the north end of Canyon Ferry Reservoir may not be suitable for some fish species because of low dissolved oxygen levels during summer and fall months.

- Close proximity to three major Montana urban areas (Helena, Bozeman, and Great Falls) increases angling and access pressure to fisheries resources throughout the upper Missouri River system. Approximately 300,000 annual angler days, or about 10% of total statewide angling pressure, occurs on the upper Missouri River reservoir system. Fisheries resource challenges regarding access and angler expectations are expected to rise over the next decade.

- Reservoir operations that result in average annual elevation fluctuations (e.g. approximately 12 feet annually in Canyon Ferry Reservoir) limits establishment of shoreline vegetation to serve as spawning and rearing habitat for yellow perch or other species with similar spawning requirements.

- Extended surface water spills during spring run-off may result in fish loss/transport into downstream adjacent water. Losses of perch, walleye and rainbow trout have been documented and may be significant.

- Localized depletions of fish may occur during intensive fishing periods (e.g. concentrated areas of yellow perch anglers during high-use periods in the winter) limiting recruitment and survival in distinct subpopulations in the reservoir.

- Expansion of the northern pike and smallmouth bass populations could increase predation on an already limited forage base.

- Funding to address issues related to reservoir operations and fisheries is limited. Partnerships with Bureau of Reclamation and NorthWestern Energy are vital for identifying and addressing problems associated with dam and reservoir operations.

- Aquatic invasive species and aquatic pathogens have been found or suspected in the system. Aquatic invasive species have the potential to reduce the reproductive success of various fish species, cause dynamic changes to the structure of the food web or negatively impact angling experience.

Species Goals and Strategies

Rainbow Trout

Goals

Rely on rainbow trout to continue providing angling opportunity at approximately the current angler catch rate. Maintain rainbow trout stocking size and rates that meet or exceed angler demand. Recognize that established management plan relative abundance goal ranges cannot be achieved for reservoirs without annual FWP recommended stocking size and rates.

- Achieve and maintain relative abundance for rainbow trout per net, based on standardized fall floating gillnet surveys, within waterbody specific relative abundance goal ranges

- Achieve and maintain waterbody specific average summer angler catch rates, if applicable.

Waterbody Strategies

Canyon Ferry Reservoir:

- Relative abundance goal range: 4 to 6 rainbow trout per net

- Angler catch rate goal: 0.25 rainbow trout per hour

- Annually stock 100,000 Arlee rainbow trout over 7 inches in the summer and 200,000 Eagle Lake rainbow trout over 7inches in the fall.

Hauser Reservoir:

- Relative abundance goal range: 3 to 5 rainbow trout per net

- Angler catch rate goal: 0.15-0.20 rainbow trout per hour

- Annually stock 100,000 8-inch Arlee rainbow trout and 50,000 8-inch Eagle Lake rainbow trout.

Holter Reservoir:

- Relative abundance goal range: 4 to 6 rainbow trout per net

- Angler catch rate goal: 0.25 rainbow trout per hour

- Annually stock 125,000 8-inch Arlee rainbow trout and 125,000 Eagle Lake rainbow trout.

All Reservoirs:

- To minimize flushing losses, stock fish after peak spring flows.

- If funding for stocking catchable rainbow trout (fish > 7-inches in length) is unavailable, management strategies for rainbow trout, walleye, and yellow perch will be reevaluated.

- Maintain annual monitoring and data collection to evaluate if management goals are being met.

    - If relative abundance levels (fish per net) in fall floating gillnet surveys move above or below rainbow trout per net goal ranges and/or angler catch rates decline substantially, recommend changes to the stocking plan (e.g., timing and location of fish plants, different rainbow strains, size at stocking) or regulations and implement if deemed cost-effective. Determine what limiting factor is reducing rainbow trout recruitment (e.g., hatchery or strain issues, increased predation by walleye) and actively manage the fisheries as necessary

- Identify habitat and spawning enhancement projects throughout the upper Missouri River reservoir system, including tributaries, to increase wild trout abundance. Explore project collaborations with State and Federal agencies and private entities.

- Maintain restricted harvest regulations and closures associated with spawning areas to promote wild trout spawning.

- Consider stocking additional rainbow trout when additional hatchery fish are available. Do not stock if surplus fish will interfere with rainbow trout strain or season of stocking evaluations.

- Explore predation impacts from birds and fish on stocked rainbow trout recruitment.

Yellow Perch

Goals

Rely on yellow perch to provide a cost-effective, self-sustaining fishery and remain the primary forage base for reservoirs in the plan area; explore options to enhance yellow perch populations throughout the plan area. Continue to manage yellow perch as a principle game fish.

- Achieve and maintain relative abundance for yellow perch per net, based on standardized sinking gillnet surveys, within waterbody specific relative abundance goal ranges.

- Achieve and maintain waterbody specific average winter angler catch rates, if applicable, for anglers targeting yellow perch.

Waterbody Strategies

Canyon Ferry Reservoir:

- Relative abundance goal range: 6 to 10 yellow perch per net
- Angler catch rate goal: 2.0 yellow perch per hour in the winter.

Hauser Reservoir:

- Relative abundance goal range: 6 to 8 yellow perch per net

Holter Reservoir:

- Relative abundance goal range: 8 to 12 yellow perch per net
- Angler catch rate goal: 1.0 to 2.0 yellow perch per hour in the winter.

All Reservoirs:

- Continue conservative harvest regulations to minimize harvest impacts by anglers and mitigate fluctuating annual predation. Evaluate and implement further regulation changes if needed.
- Continue adequate data collection to determine if strategies are effective and the goal is being met. Data collection includes fish population monitoring and creel surveys.
- If relative abundance levels (fish per net) in summer or fall sinking gillnet surveys are above or below yellow perch per net goal ranges and/or angler catch rates decline substantially, recommend changes to regulations and implement if deemed cost-effective. Determine what limiting factor is for yellow perch recruitment (e.g., lack of habitat, increased predation by walleye) and actively manage the fisheries as necessary.
    - Consider use of more conservative angler bag limits if abundance trends remain below goal range.
    - To maximize fishing opportunity, consider more liberal bag limits when abundance trends increase above goal range.
- Continue current habitat enhancement projects (e.g., Canyon Ferry Reservoir Pines for Perch Project) as long as the project remains cost-effective and explore:
    - Additional yellow perch habitat enhancement opportunities (e.g., artificial habitat, stocking or transferring fish).
    - Opportunities to modify reservoir levels and improve shoreline spawning habitat. Work with reservoir managers and water users.
    - Potential enhancement of critical spawning habitats and nursery areas.

- Potential habitat enhancement projects.

Walleye

Goals

Rely on walleye to maintain a cost effective, self-sustaining, quality fishery to enhance the summer fishery. Manage walleye in the UMRRFMP area as a principle game fish.

- Achieve and maintain waterbody specific walleye relative abundance per net and PSD goal ranges, based on standardized fall sinking gillnet surveys (Primary).
- Evaluate criteria for determining appropriate walleye density consistent with forage availability (Secondary).

Waterbody Strategies

Canyon Ferry Reservoir:

- Relative abundance goal range: 5 to 7 walleye per net
- PSD goal range: 30 to 60

Hauser Reservoir:

- Relative abundance goal range: 4 to 6 walleye per net
- PSD goal range: 30 to 60

Holter Reservoir:

- Relative abundance goal range: 4 to 6 walleye per net
- PSD goal range: 30 to 60

All Reservoirs:

- Recognize the importance for anglers to have multiple size classes of walleyes represented in the population to better meet angler preferred walleye size of 14 to 18-inches. Potential regulation or management changes will first be identified through standardized annual surveys (e.g., netting, creel, etc.) and evaluated using established waterbody specific relative abundance (number of fish per net) and proportional stock density (PSD) goal ranges. Regulation changes will first be dependent upon walleye abundance and size-structure relative to goal ranges for walleye, other fish, and forage availability.
- It is expected that a walleye fishery with good angler catch rates and desired size classes, while minimizing impacts to other adjacent fisheries, can be maintained with the goal ranges listed for each reservoir.

- Use angler harvest regulations to manage walleye population abundance and reduce predation on other species. This remains the most cost-effective and selective management tool available to manage the walleye population. Bag limits above standard regulations for the Central Fishing District for walleye (5 daily and 10 in possession) are necessary to maintain a suitable forage base and preserve populations of other species. Modified angler bag and size limits may be used as management tools to improve desirable size groups (i.e., slot limits, bag limits, closures, etc.).

- If needed, implement more aggressive management to control walleye population growth or manage population size structure. Goal ranges for modifying management actions will be based on annual standardized surveys.

- Additional aggressive management techniques may be implemented if, based on 2 to 3 years of species-specific standardized surveys, any of the following criteria are reached:

    1. Walleye density increases above prescribed relative abundance goal ranges and/or decrease below prescribed PSD goal ranges.
    2. Yellow perch densities decrease below prescribed relative abundance goals ranges.
    3. Rainbow trout density decreases below prescribed relative abundance goal ranges and walleye predation determined the primary factor limiting rainbow trout recruitment.

- Upon reaching goal range targets listed above and within the adaptive management framework more aggressive actions may be implemented following public discussion. The following actions may be considered through a MEPA analysis and/or public review process of FWP Commission action:

    - Increase angler bag limits for walleye. This would likely be the first action implemented to reduce walleye densities.

    - Consider use of gill nets or trap nets to remove walleye during periods when fish are concentrated in specific areas (e.g., spawning period, fall).

    - Allow spear fishing by submerged swimmers or through the ice to increase harvest. Consider imposing a maximum size restriction to prevent targeting the biggest fish and to retain a trophy component in the fishery.

    - Evaluate walleye fishing contests as a tool to aggressively harvest fish.

    - Authorize commercial harvest of walleye. Authorization from the Montana Legislature to allow the taking and sale of walleye (87-4-601, Montana Code Annotated (MCA)) and subsequently revise the Administrative Rules of Montana governing commercial fishing (12.7.101, Administrative Rules of Montana (ARM)) would be necessary before allowing commercial harvest of walleye.

    - Use electrofishing to remove walleye during periods of high concentration (e.g., fish congregations at tributary mouths during low flow periods, migrating fish in spring).

- If it is determined that harvest is affecting the walleye population, changes may be necessary to support a viable, quality-sized walleye population. Walleye daily and possession limits may be modified, and if applicable contests will be evaluated. Management decisions will be based on

multiple years of standardized survey values if they fall outside (above or below) relative abundance and/or PSD goal ranges.

- Decreases to walleye harvest limits will be considered if multiple years of standardized walleye survey values decrease below waterbody specific relative abundance goal ranges and within PSD goal ranges, perch and rainbow abundance are within or above relative abundance goals, and only after impacts to perch and rainbow populations are identified and evaluated.

- Increases to walleye harvest limits will be considered if multiple years of standardized walleye survey values increase above relative abundance goal ranges and/or fall below PSD goal ranges, yellow perch and/or rainbow trout abundance are below relative abundance goal ranges, and only after impacts to perch and rainbow populations are identified and evaluated.

- Explore additional monitoring and research as needed (e.g., supplemental netting, tagging studies, creel surveys, flushing, entrainment, age-structure, etc.).

Brown Trout

Goals

Rely on brown trout to provide a limited trophy-fishing experience that is reliant entirely on wild reproduction.

- Achieve and maintain waterbody specific brown trout relative abundance per net goal ranges, if applicable, based on standardized fall sinking gillnet surveys.

Waterbody Strategies

Canyon Ferry Reservoir:

- Relative abundance goal range: 0.5 to 1.5 brown trout per net

Hauser Reservoir:

- Relative abundance goal range: 0.5 to 1.5 brown trout per net

All Reservoirs:

- Continue restrictive regulations to protect brown trout.

- Maintain current catch and release (except anglers 14 years old and younger on Canyon Ferry and Hauser) only regulations.

- Recommend allowing harvest if brown trout abundance increases above management goal ranges.

- Continue ongoing efforts to enhance spawning and rearing habitat for brown trout.

- Continue work with landowners and irrigators to reduce dewatering of critical streams during brown trout spawning (fall). Obtaining water leases for instream flow will continue as funding allows.

- Continue work with Department of Natural Resource and Conservation (DNRC) for Canyon Ferry Reservoir, Bureau of Reclamation for Hauser, and Northwestern Energy for Holter to mitigate impacts of hydropower on fish populations; specifically, brown trout.

- Continue to explore brown trout population limiting factors and habitat enhancement projects throughout the UMRRFMP area.

Burbot (Ling)

Goals

Rely on burbot to compliment the winter fishery by maintaining the current level of burbot in reservoirs in the UMRRFMP area.

- Achieve and maintain waterbody specific burbot relative abundance per net goal ranges, if applicable, based on standardized fall sinking gillnet surveys.

Waterbody Strategies

Canyon Ferry Reservoir:

- Relative abundance goal range: 0.25 to 0.5 burbot per net

Hauser Reservoir:

- Relative abundance goal range: 0.5 to 1.5 burbot per net

Holter Reservoir:

- Relative abundance goal range: 0.25 to 0.5 burbot per net

All Reservoirs:

- Improve data collection to better understand burbot population dynamics by exploring projects that identify burbot limiting factors.

- Provide brood and/or foundation stock, if necessary, for re-introductions to other waters for conservation and angling considerations.

- Maintain current angler harvest regulations unless relative abundance goal ranges are not met. If goal ranges are not met, recommend adjustments to bag limits.

- Increase effort during winter creel to determine burbot harvest.

Forage Fish

Goals

Manage and enhance the forage base to support a productive, quality multi-species fishery that includes walleye, trout, and yellow perch as principle game fish.

- Achieve and maintain waterbody specific forage fish goals based on standardized annual surveys.

Waterbody Strategies

Canyon Ferry Reservoir:

- White sucker relative abundance goal range: 5.0 to 10.0 fish per net

- Achieve and maintain mid-summer zooplankton density of 20 per liter with current zooplankton species composition based on annual standardized survey.

All Reservoirs:

- Maintain yellow perch relative abundance levels to within or above waterbody specific goal ranges.

- Prevent depletion of the available forage by managing the walleye population at a sustainable level within waterbody specific relative abundance goal ranges. Consider active walleye management measures if primary forage fish species decrease significantly.

    - Active management measures may include increasing walleye bag limits, species specific netting, or commercial fishing. See reservoir Walleye species goals section discussion for adaptive management strategies.

- Explore opportunities for forage enhancement projects throughout the plan area by partnering with civic organizations, NGO's, and State or Federal agencies.

- Give priority to increase current forage species to support the principle game fish. Previous evaluation of forage introductions has shown that risks associated with a new species introduction outweigh any potential benefits. Consequently, no new species will be evaluated or considered for introduction into the management plan area (MFWP 2010).

- FWP will work to prevent the unauthorized introduction of new fish species to protect the resident fish community. Implementation measures would include development of a public education program, surveillance, and strict enforcement of State laws and policies prohibiting introduction of unauthorized species (MFWP 2010)

Northern Pike

Goals

Monitor and suppress the northern pike population from Toston Dam to Holter Dam and evaluate impacts to other species.

Waterbody Strategies

Toston Dam to Canyon Ferry Reservoir:

- Allow spear fishing for northern pike in the impoundment above Toston Dam and in Canyon Ferry Reservoir.

All Plan Area Sections:

- Eliminate angler bag limits for northern pike in the upper Missouri River reservoir system and manage northern pike population according to the Missouri River Basin Northern Pike Suppression Project EA Decision Notice. See Appendix E for additional discussion on northern pike suppression efforts within the Upper Missouri River Reservoir Fisheries Management Plan area.

- Identify critical spawning habitats in the upper Missouri River reservoir system and determine if habitat manipulations can suppress pike numbers and emigration through the system.

- Explore and implement other opportunities or techniques to suppress northern pike throughout the plan area and determine impacts to existing forage fish.

- Additional management methods may be necessary to reduce pike populations (e.g., spearing, commercial fishing, required harvest during tournaments) following public review and/or FWP Fish and Wildlife Commission or MEPA process.

Kokanee Salmon

Goals

Recognize kokanee salmon as a limited supplemental species to rainbow trout with low opportunity as a viable angling species in Hauser and Holter Reservoirs. Current kokanee abundance is too low to set or maintain a realistic management goal.

Waterbody Strategies

Hauser Reservoir:

- Evaluate mitigation of water quality issues, walleye predation, and flushing rates of kokanee to determine if stocking is feasible.

- Evaluate other strategies that may provide cost-effective solutions to maintaining the Hauser Reservoir kokanee fishery (e.g., artificial spawning channels).

- Monitor tributary streams and drainage ditches to assess spawning stock present in Hauser Reservoir.

- When feasible attempt to develop occasional kokanee fishing opportunity through stocking with the understanding the fishery may provide short term or cyclic angling opportunity.

Holter Reservoir:

- Consider supplementing the Holter Reservoir fishery by stocking surplus kokanee when available.

- Determine appropriate kokanee densities to maintain kokanee fishery with minimal impacts to brown trout spawning

    - Monitor river and reservoir brown trout population densities to determine if kokanee spawning negatively effects brown trout recruitment.

    - Adjust or eliminate stocking of surplus kokanee if brown trout densities in the Missouri River from Hauser Dam to Holter Reservoir declines below 100 fish per mile.